

**IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF MASSACHUSETTS**

SKYLINE SOFTWARE SYSTEMS, INC.,

Plaintiff,

v.

KEYHOLE, INC., and  
GOOGLE INC.

Defendants.

CIVIL ACTION NOS. 04-11129 DPW &  
06-10980 DPW

**DEFENDANTS' RESPONSIVE CLAIM CONSTRUCTION BRIEF**

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## TABLE OF CONTENTS

	Page(s)
I. INTRODUCTION .....	1
II. THE COURT SHOULD ADOPT GOOGLE’S PROPOSED CONSTRUCTIONS .....	3
A. Disputed Claim Terms Used in All the ’189 Patent Claims .....	3
1. “receiving from the renderer” and “providing the renderer” .....	4
2. “downloading . . . if the provided block from local memory is not at the indicated resolution level” .....	6
3. “downloading” .....	7
B. Disputed Terms of Claim 2 of the ’189 Patent .....	8
1. “succession of resolution levels” .....	8
C. Disputed Terms of Claim 3 of the ’189 Patent .....	14
1. “plurality of coordinates being included in a plurality of respective distinct blocks” .....	14
D. Disputed Terms of Claim 7 and its Dependent Claims .....	16
1. “when not downloading blocks required by the renderer” .....	16
2. “Internet” .....	19
3. “substantially all of the blocks surrounding a point in the terrain seen from the current viewpoint within a predetermined distance range” .....	22
III. CONCLUSION .....	23

## TABLE OF AUTHORITIES

## Page(s)

Cases

<i>Exxon Chemical Patents, Inc. v. Lubrizol</i> , 64 F.3d 1553 (Fed. Cir. 1995).....	2, 10, 15
<i>General Am. Transp. Co. v. Cryo-Trans, Inc.</i> , 93 F.3d 766 (Fed. Cir. 1996).....	9
<i>Generation II Orthotics, Inc. v. Medical Tech., Inc.</i> , 263 F.3d 1356 (Fed. Cir. 2001).....	15, 16
<i>Interactive Gift Express, Inc. v. CompuServer, Inc.</i> , 256 F.3d 1323 (Fed. Cir. 2001).....	16
<i>Jurgens v. McKasy</i> , 927 F.2d 1552 (Fed. Cir. 1991).....	1
<i>Multiform Dessicants, Inc. v. Medzam, Ltd.</i> , 133 F.3d 1473 (Fed. Cir. 1998).....	1, 10
<i>O.I. Corp. v. Tekmar Co., Inc.</i> , 115 F.3d 1576 (Fed. Cir. 1997).....	11
<i>Phillips v. AWH Corp.</i> , 415 F.3d 1303 (Fed. Cir. 2005).....	1, 2, 9, 11, 12, 15
<i>Power Mosfet Techs., LLC v. Siemens AG</i> , 378 F.3d 1396 (Fed. Cir. 2004).....	9
<i>Seachange Int'l, Inc. v. C-Cor Inc.</i> , 413 F.3d 1361 (Fed. Cir. 2005).....	11
<i>Spectrum Int'l, Inc. v. Sterilite Corp.</i> , 164 F.3d 1372 (Fed. Cir. 1998).....	7
<i>Tandon Corp. v. United States Int'l Trade Comm'n</i> , 831 F.2d 1017 (Fed. Cir. 1987).....	10, 14
<i>Vitronics Corp. v. Conceptronic, Inc.</i> , 90 F.3d 1576 (Fed. Cir. 1996).....	16

## I. INTRODUCTION

The common thread throughout Skyline’s proposed constructions is that they were made without regard to the intrinsic record and with only one goal in mind: to contort the ’189 patent claims to read on the accused Google Earth product. *See e.g.*, Skyline’s Opening Brief at 4. Such an approach is improper; claims are to be construed in light of the patent specification and prosecution history, and without regard to the accused products. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1314 (Fed. Cir. 2005); *Multi-form Dessicants, Inc. v. Medzam, Ltd.*, 133 F.3d 1473, 1477 (Fed. Cir. 1998) (stating that patent claims must be construed without reference to the accused device); *Jurgens v. McKasy*, 927 F.2d 1552, 1560 (Fed. Cir. 1991) (“claim construed without regard to the accused product”). Indeed, this was among the reasons that the Court initially phased this case.

Skyline makes very little reference to the patent specification, and no reference at all to the prosecution history in support of its proposed constructions. Instead, it resorts to diversionary tactics, pointing fingers and encouraging the Court to turn a blind eye, hoping to avoid the intrinsic record, the context of the patent and the limits of what, if anything, was actually invented. For many of the disputed terms, Skyline fails to offer support for its constructions or offers no construction at all, relying solely on attacking Google’s proposed constructions.

Such attacks, like Skyline’s claim construction positions, lack merit. Skyline repeatedly accuses Google of importing extraneous limitations into the claim terms. Google’s constructions, however, are based on the intrinsic record and properly give meaning to all the words in the claims. For example, Skyline accuses Google of importing the limitation of an “order” into the construction of “succession of resolution levels” in claim 2 of the ’189 patent. But Skyline simply ignores the word “succession,” which is explicitly in the claim language, and

which means “the act or process of following in order; sequence.” Chang Decl., Ex. F. Skyline also ignores other words *in the claim* that define its context, to wit: “from the level immediately higher ... up to the maximal existent resolution level.” Together with the fact that all of this language *in the claim* describes how data blocks are “downloaded,” the context of the claim language clearly speaks to the order in which data blocks are downloaded. Thus, Google is not importing limitations; Skyline is hiding from the words of the claim and improperly reading out limitations. *See Exxon Chemical Patents, Inc. v. Lubrizol*, 64 F.3d 1553, 1557 (Fed. Cir. 1995) (stating that meaning must be given to all the words in a claim).

Skyline also accuses Google of trying to circumvent the Court’s prior claim construction, but fails to explain how Google’s constructions of “receiving from the renderer” and “providing the renderer” achieve that end. In truth, Google’s proposed constructions ensure those phrases are interpreted consistently with the Court’s construction of “renderer.” Having no competing construction of its own and unable to escape the Court’s prior construction and the disclosures in the patent specification which support it, Skyline offers nothing more than bare accusations.

These are the types of baseless arguments Skyline advances, but unfounded accusations cannot save unsupported claim constructions. Claim construction must be based first and foremost on the claims themselves, the specification, and the prosecution history. *Phillips*, 415 F.3d at 1314-17. Skyline’s ostrich approach to the intrinsic evidence cannot prevail. Proper claim construction interprets the claims in light of the entire patent, the prosecution history, and applies the correct rules of construction. Google’s proposed constructions do this and should therefore be adopted by the Court.

## II. THE COURT SHOULD ADOPT GOOGLE'S PROPOSED CONSTRUCTIONS

### A. Disputed Claim Terms Used in All the '189 Patent Claims

Skyline does not advance any affirmative claim constructions of its own for the disputed terms that appear in all the claims of the '189 patent. It instead argues that because these terms also appear in claims 1 and 12, they are not properly before the Court in this round of claim construction.<sup>1</sup> Skyline argues that any phrase appearing in claims 1 and 12 should have been addressed only during the first round of claim construction and that Google should not be allowed a second bite at the apple. By doing this, Skyline hopes to side-step the consequences of the proper construction of the “downloading,” “receiving from the renderer,” “providing the renderer,” and “downloading . . . if the provided block from the local memory is not at the indicated resolution level” phrases. Skyline's argument should be disregarded for several reasons.

As a preliminary matter, the “downloading . . . if the provided block from the local memory is not at the indicated resolution level,” “receiving from the renderer,” and “providing the renderer” phrases were, in fact, identified by Google as disputed terms during the first round of claim construction as part of larger phrases. *See* Defendant's March 25, 2005 Responsive Claim Construction Brief [Docket # 49] at 25-26, and 30-32. Skyline, however, refused, as it does now, even to address the proper construction of these terms. *See* Skyline's April 8, 2005 Reply Claim Construction Brief [Docket # 54] at 19, 21.

Thus, Google is not taking a second bite at the apple, but merely finishing its first bite. The Court is not being asked to revisit terms it has already construed. None of the terms in

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<sup>1</sup> As Skyline has failed to put forth any arguments in support of its positions regarding the disputed claim terms used throughout all the '189 patent claims, it should be precluded from doing so for the first time in its responsive claim construction brief. At the very least, Google should be afforded an opportunity to respond to any arguments Skyline makes in support of its positions regarding the disputed terms used in all the claims of the '189 patent.

dispute now was construed or addressed by the Court's March 24, 2006 claim construction order, and they remain disputed as they are also found in the newly asserted claims other and 1 and 12. There is no attempt to end-run the Court's prior claim construction ruling. Google's proposed constructions are entirely consistent, and even based upon, the Court's previous constructions. Skyline has not and cannot show otherwise. Indeed, both parties agree that the Court's prior claim construction ruling is controlling and claim terms addressed by the Court's previous order should be construed consistently throughout all claims of the patent. *See* Skyline's Opening Brief at 8.

Finally, since the first round of claim construction, Skyline has asserted fifteen other claims of the '189 patent in addition to claims 1 and 12. During the first round of claim construction, Google attempted to narrow the list of disputed claim terms to just those implicated by allegations of the infringement and/or invalidity of claims 1 and 12, minimizing the burden on the Court and the parties. The addition of fifteen new claims continues to implicate claim terms that were previously at issue as well as new terms not found in claims 1 and 12. Therefore, while the Court did not previously need to construe some of these terms, they should now be addressed with respect to the additional claims being asserted by Skyline, and they should be construed according to the correct constructions provided by Google.

**1. “receiving from the renderer” and “providing the renderer”**

<b>Google's Proposed Construction</b>	<b>Skyline's Proposed Construction</b>
<b>“receiving from the renderer” or “receives . . . from a renderer”</b>	
an object other than the renderer receiving [or receives] from the renderer	no construction needed
<b>“providing the renderer” or “provide the renderer”</b>	
an object other than the render providing the renderer	no construction needed

Contrary to Skyline's assertions, Google did previously request that “receiving from the

renderer” and “providing the renderer” be construed to mean that it is an object other than the renderer that does the receiving and providing. *See* Defendants’ March 25, 2005 Responsive Claim Construction Brief [Docket # 49] at 25-26, and 30. Consistent with its previous arguments and the Court’s claim construction ruling, that is the same interpretation Google proposes now.

Offering no affirmative position of its own, Skyline suggests that Google is trying to escape the Court’s construction of “renderer.” Any argument that Google is trying to undo the Court’s construction of “renderer” is disingenuous as the Court largely agreed with Google’s correct construction of that term. Indeed, Google identified these phrases as disputed terms to ensure they are interpreted consistently with the Court’s construction of “renderer,” which makes clear that it is *another object* that receives coordinates and a resolution level from the claimed renderer. *See* Claim Construction Order at 32 (construing “renderer” to mean, in part, a software and/or hardware objects that determines and provides *to another object* the required coordinates in the terrain along with a respective resolution level). Yet, Skyline refuses to accept Google’s proposed construction that another object does the receiving from the renderer and the providing to the renderer. To the extent Skyline now believes that the Court’s prior construction of “renderer” is controlling and dispositive of any dispute regarding the “receiving from the renderer” and “providing the renderer” claim terms, Google agrees.

As the specification and the Court’s claim construction ruling supports Google’s proposed construction (*see* ’189 patent at cols. 3:57-61, 14:10-16 and Google’s Opening Brief at 10-11), and Skyline offers no alternative construction or substantive argument, the Court should correctly construe “*receiving from the renderer*” as “*an object other than the renderer receiving from the renderer.*” Similarly, “*providing the renderer*” should be construed as “*an*



*object other than the renderer providing the renderer.” See also* Feiner Decl. ¶¶ 20-22.

**2. “downloading . . . if the provided block from local memory is not at the indicated resolution level”**

Google’s Proposed Construction	Skyline’s Proposed Construction
<p align="center"><b>“downloading . . . if the provided block from the local memory is not at the indicated resolution level”</b></p> <p align="center">or</p> <p align="center"><b>“downloads . . . if the first block is not from the indicated resolution level”</b></p>	
downloading ( <i>i.e.</i> , requesting over a network and receiving in local memory from a separate computer) . . . upon a determination of whether the first data block is not of the indicated resolution level	no construction needed

Skyline also fails to advance its own substantive position with respect to the claim element of “downloading . . . if the provided block from local memory is not at the indicated resolution level,” resting solely on the argument that Google did not previously identify this as a disputed term and should be precluded from doing so now. To the contrary, Google did indeed identify this term as a disputed term with the initial round of claim construction. *See* Defendants’ March 25, 2005 Responsive Claim Construction Brief [Docket # 49] at 31-32. That phrase has not been construed, and yet the dispute over its meaning remains.

That being the case, Skyline can offer no explanation of how Google’s arguments would end-run the Court’s claim construction order, nor can it counter the fact that Google’s proposed construction is consistent with and supported by the teachings in the specification and statements made during prosecution of the application that issued as the ’189 patent. The specification indicates that the required blocks are ordered from the remote server “*if* the block is not carried by the cache manager” or “*if* they are not already stored in cache memory.” ’189 patent at cols. 3:60-64. 11:62-65 (emphasis added); *see also* Google’s Opening Brief at 12-13. Because computers cannot simply “know” whether the first block from local memory is at the required

resolution level (i.e., whether the required blocks are in local memory), these phrases are properly construed as requiring that such determinations be made before blocks are downloaded from the remote server. *See* Feiner Decl. ¶¶ 23-26.

In addition, the '189 patent applicants highlighted this requirement as distinguishing the invention from the prior art, thus self-imposing an important limitation on the scope of the invention. '189 patent file history at Chang Decl., Ex. B at 3 (stating that the prior art “fails to teach downloading additional blocks from a remote server *if blocks at the required resolution level are not present on the local memory*”) (emphasis added); *see also* *Spectrum Int’l, Inc. v. Sterilite Corp.*, 164 F.3d 1372, 1378-79 (Fed. Cir. 1998) (stating that an applicants’ statement made in distinguishing the claimed invention over the prior art indicates the scope of the claims). Accordingly, the correct construction of “*downloading . . . if the provided block from the local memory is not at the indicated resolution level*” is “*downloading . . . upon a determination of whether the first data block is not of the indicated level of detail per unit area.*”

### 3. “downloading”

Google’s Proposed Construction	Skyline’s Proposed Construction
<b>“downloading”</b>	
requesting over a network and receiving in local memory from a separate computer	no construction needed

The meaning of the “downloading” term has come to the forefront because many of Skyline’s fifteen newly asserted claims concern the particular manner or order in which data blocks are “downloaded” from a remote server; limitations that were not implicated when only claims 1 and 12 were at issue. *See e.g.* '189 patent, claim 2 at col. 16:46-47, claim 3 at col. 16:66-67, claim 11 at col. 18:10-11, claim 14 at cols. 18:66-19:1, claim 16 at col. 19:41-46, and claim 21 at col. 20:35-36. Take claim 3 for example, which requires that “blocks of lower

resolution levels are downloaded before blocks of higher resolution levels.” ’189 patent at col. 16:66-67. Because the patent specification makes clear that the downloaded blocks are to be used to render and update the view, Google’s proposed construction, which includes both the request *and* the receipt of the data blocks, is the correct construction. Thus, the Court should now construe “downloading” to delineate the proper scope of these newly asserted claims, and it should properly define it as “requesting over a network and receiving in local memory from a separate computer.”

As more fully explained in Google’s Opening Claim Construction Brief, Google’s proposed construction is supported by the patent specification, which makes clear that “downloading” is not completed until a data block is *received* in the local memory of a user’s computer. ’189 patent at cols. 12:5-7, 12:66-13:2, and 14:44-46; Feiner Decl. ¶¶ 16-17; *see also* Google’s Opening Brief at 7-8. Unless received, the block cannot be used to display the terrain or update the view. As with many of the other disputed claim terms, Skyline offers no competing construction and does not even contest the merits of Google’s proposed construction.<sup>2</sup> Accordingly, the correct construction of “*downloading*” is “*requesting over a network and receiving in local memory from a separate computer.*”

## **B. Disputed Terms of Claim 2 of the ’189 Patent**

### **1. “succession of resolution levels”**

<b>Google’s Proposed Construction</b>	<b>Skyline’s Proposed Construction</b>
<b>“succession of resolution levels”</b>	
in order of increasing resolution level	no construction given

Skyline does not propose a construction for the “succession of resolution levels”

<sup>2</sup> Skyline makes reference to Google’s proposed construction of “downloading” in its discussion of the “succession of resolution levels” phrase. To the extent Skyline makes such reference to contest Google’s construction of “downloading,” Google addresses those arguments with the “succession of resolution levels” discussion in Section II.B.1.

language in claim 2 of the '189 patent. Instead, it relies on the extrinsic opinion of its retained expert to suggest that “succession of resolution levels” simply refers to the resolution levels of the data that is stored in a hierarchical structure. *See* Skyline’s Opening Brief at 11-12; Manocha Decl. ¶ 12. But extrinsic opinions cannot be used to contradict the public record contained in the patent claims and specification. *Phillips*, 415 F.3d at 1318.

Skyline’s retained expert’s opinion is contrary to the intrinsic record first of all because even without the “succession of resolution levels” language, claim 2, which depends from claim 1 and contains all its limitations, already requires that one or more additional data blocks be downloaded from a remote server, and that those data blocks belong to a hierarchical structure. '189 patent at col. 16:29-30 and 16:39-40; *see also* Supplemental Declaration of Steven K. Feiner, Ph.D. in Support of Defendants’ Responsive Claim Construction Brief (“Supp. Feiner Decl.”) ¶ 5. That being the case, claim 2’s addition of the “succession of resolution levels” limitation must mean something more. Adopting Skyline’s understanding of “succession of resolution levels” would render that phrase redundant and superfluous, a disfavored result. *Power Mosfet Techs., LLC v. Siemens AG*, 378 F.3d 1396, 1410 (Fed. Cir. 2004) (stating that interpretation of claims rendering claim terms superfluous is generally disfavored); *General Am. Transp. Co. v. Cryo-Trans, Inc.*, 93 F.3d 766, 770 (Fed. Cir. 1996) (rejecting claim construction that rendered another claim limitation superfluous); Supp. Feiner Decl. ¶ 5.

In addition, no intrinsic evidence supports Skyline’s position. While both Skyline and its expert reference portions of the specification that discuss the preparation and hierarchical nature of the database of data blocks, such portions provide absolutely no insight as to how that hierarchical database structure relates to the “succession of resolution levels” language. *See* Skyline’s Opening Brief at 11-12 and Manocha Decl. ¶¶ 12, *citing* '189 patent at cols. 8:6-9 and

9:1-21; *see also* Supp. Feiner Decl. ¶ 4.

Skyline's attacks of Google's construction are not only unsupported but contrary to the claim language. Skyline first argues that there is no express language in the claim that requires "downloading" "in order of increasing resolution levels." *See* Skyline's Opening Brief at 12, 14. But the requirement of such an order is taken straight from the claim language reciting that "downloading" take place in a "succession," "from the level immediately higher ... up to the maximal existent resolution level." This claim language clearly refers to a particular order or sequence, as found in the very meaning of "succession." Chang Decl., Ex. F. The reality is that Google is not importing a limitation; rather, Skyline is ignoring claim limitations, improperly reading them right out of the patent. *Exxon Chemical Patents*, 64 F.3d at 1557 (finding that a construction that reads out limitations from a claim is improper).

Skyline next argues that Google's construction violates the doctrine of claim differentiation because "succession of resolution levels" in claim 2 cannot mean "in order of increasing resolution level" when claim 3 already requires the download of lower resolution data blocks before higher resolution data blocks. *See* Skyline's Opening Brief at 14-15. Such an argument is without merit. The doctrine of claim differentiation presumes that there is a difference in scope among the claims of a patent. *Multiform*, 133 F.3d at 1479, *citing Tandon Corp. v. United States Int'l Trade Comm'n*, 831 F.2d 1017, 1023 (Fed. Cir. 1987). Skyline's argument thus rests on finding that there is no difference between claims 2 and 3 if "succession" is construed as Google proposes.

Under Google's proposed construction, however, claims 2 and 3 still differ in many respects. Claim 2 requires the download of data blocks "from the level immediately higher than the resolution level of the first block up to the maximal existent resolution level on the server not

above the indicated resolution level.” ’189 patent at col. 16:47-49. Claim 3 only requires that lower resolution levels are downloaded before blocks of higher resolution, but sets no starting or end point. *Id.* at col. 16:66-67. In addition, claim 3 contains the further limitation of downloading data blocks that correspond to a “plurality of respective distinct blocks,” a limitation not present in claim 2. *Id.* at col. 16:62-63. None of these differences is affected by Google’s construction of “succession of resolution levels.” Claims 2 and 3 remain distinct even when “succession” is properly construed to require a download order. Consequently, there is no claim differentiation issue, and the Court should reject Skyline’s attempt to fabricate one.<sup>3</sup>

Finally, Skyline argues that Google’s proposed construction of “succession of resolution levels” is overly limited or somehow runs counter to the underlying limits of technology when combined with Google’s proposed construction of “downloading.” *See* Skyline’s Opening Brief at 12. Skyline relies on its expert to argue that none of the communication protocols used by the claimed invention can guarantee that data blocks be returned to the client computer in a particular order, and therefore “succession of resolution levels” cannot require an ordering. *Id.* at 13-14; Manocha Dec. ¶¶ 13-16. A close look shows that this argument is unsupported by Skyline’s expert declaration, and in any event, improperly contradicts the intrinsic record. *Supp. Feiner Decl.* ¶ 6; *see also Phillips*, 415 F.3d at 1315-17, 1319 (stating that extrinsic evidence of expert unreliable if inconsistent with or contradicted by the intrinsic record).

A review of the intrinsic record makes clear that the ’189 patent does in fact contemplate and, at times, specifically requires that data blocks be downloaded in a particular order. *E.g.*, ’189 patent at cols.3:36-38, 4:41-43; *see also* claims 3, 11, 14, 16 and 21; *Supp. Feiner Decl.* ¶ 6.

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<sup>3</sup> Furthermore, Claim differentiation is not a “hard and fast rule of construction.” *Seachange Int’l, Inc. v. C-Cor Inc.*, 413 F.3d 1361, 1369 (Fed. Cir. 2005) (internal citations omitted). Where the description provides a clear meaning for the language of the claims, it trumps the doctrine of claim differentiation. *O.I. Corp. v. Tekmar Co., Inc.*, 115 F.3d 1576, 1582 (Fed. Cir. 1997).

Thus, Skyline's argument that an "ordering" cannot be required by the "succession of resolution levels" phrase due to the limitations of the communications system is contrary to the teachings and requirements of the '189 patent. Indeed, even Skyline cannot deny that other claims, like claim 3 of the '189 patent, requires a download order. *See* Skyline's Opening Brief at 14.

Notably, Skyline's and its retained expert's discussion of the communication protocols purported to be used by the '189 patent is made without any reference to the patent specification or file history. Expert testimony is "unlikely to result in a reliable interpretation of patent claim scope unless considered in the context of the intrinsic evidence [i.e., the specification and the prosecution history]." *Phillips*, 415 F.3d at 1315-17, 1319. Nothing in the intrinsic record supports Skyline's claim that an ordering of the downloads is precluded by the technology. Indeed, Skyline has, in the past, repeatedly emphasized the '189 patent invention's download of low resolution data blocks before high resolution data blocks such that images first appear blurry and then sharpen over time. *See e.g.* Skyline's Motion for Preliminary Injunction [Docket # 63] at 8-10 ("The lower resolution data blocks are then supplemented by sequentially higher resolution data blocks streamed from a server to the client until a higher resolution images of 3D terrain is displayed"); Declaration of Terry Keating Ph.D. in Support of Motion for Preliminary Injunction [Docket # 65] ¶ 9 ("Resolution blocks with successively higher resolution levels are then downloaded to sharpen the image rendered at the client").

Furthermore, the prosecution history establishes that the "succession of resolution levels" limitation requires a download order. Specifically, the applicants stated during prosecution that the limitations of the claim that issued as claim 2 of the '189 patent require a "download order based on resolution levels." Chang Decl., Ex. B at 3 (highlighting that feature as distinguishing the claim from the prior art); *see also* Ex. C at 11; Feiner Decl. ¶ 29. The

patent specification further discusses the download of data blocks “*in order of increasing resolution levels.*” ’189 patent at col. 14:40-42 (emphasis added); *see also* Google’s Opening Brief at 15-16; Feiner Decl. ¶¶ 27-28.

What Skyline’s argument on “succession” really seeks to address is Google’s construction of “downloading” as requiring both the request *and receipt* of data blocks. When data blocks are requested in a particular order, Skyline argues that a client-server system that operates over the Internet normally cannot guarantee that the data blocks be received in the order they were requested. Skyline’s Opening Brief at 13-14; Manocha Decl. ¶¶ 13-16. The ’189 patent, however, claims methods and apparatuses that can and do guarantee that data blocks are received, as well as requested, in a particular order. Supp. Feiner Decl. ¶ 7. In fact, Skyline’s expert concedes that such systems can exist, because he qualifies his “arrive out-of-order” opinion with the phrase, “*unless the description expressly conveys otherwise.*” Manocha Decl. ¶ 16.

The ’189 patent specification expressly does “convey otherwise,” fitting Skyline’s expert’s exception scenario precisely. Supp. Feiner Decl. ¶ 7. In discussing the download of lower resolution data blocks before higher resolution data blocks, the specification explains, “[c]ache manager **74** preferably *always* requests that server **26** send a block **42** after the cache manager *has received* its parent block.” ’189 patent at col. 12:5-7; Supp. Feiner Decl. ¶ 7; *see also* Google’s Opening Brief at 7-8.

Extending Skyline’s postal service analogy, the ’189 patent thus guarantees a first letter will be received before a second letter because the second letter is dropped in the mail only after the first letter has already been received by the recipient. Supp. Feiner Decl. ¶ 7. Indeed, Skyline contradicts its own argument, admitting that downloading requires request and receipt.



When describing claim 3's requirement that lower resolution data blocks be *downloaded* before higher resolution data blocks, Skyline proclaimed that "[c]laim 3 expressly specifies an order in which data blocks are to be requested *and received*." Skyline's Opening Brief at 14 (emphasis added).

In light of Skyline's admission and the concession of its expert that a particular ordering of the receipt of data blocks is possible, "*succession of resolution levels*" should be construed to mean "*in order of increasing resolution levels*."

**C. Disputed Terms of Claim 3 of the '189 Patent**

**1. "plurality of coordinates being included in a plurality of respective distinct blocks"**

Google's Proposed Construction	Skyline's Proposed Construction
<b>"plurality of coordinates being included in a plurality of respective distinct blocks"</b>	
each one of the plural sets of coordinates being included in a separate distinct one of a plurality of data blocks describing three-dimensional terrain	more than one set of coordinates being described by the data contained in more than one data block

Unlike the other asserted claims of the '189 patent, which require receiving from the renderer "one or more coordinates in the terrain," claim 3 requires receiving "a plurality of coordinates in the terrain" and further explains that the "plurality of coordinates [are] included in a plurality of respective distinct blocks." '189 patent, claim 3 at col. 16:55-57; *compare e.g.*, claim 7 at col. 17:47-48. Thus, the "plurality of coordinates being included in a plurality of respective distinct blocks" must mean something different than the "one or more coordinates in the terrain" claimed in the other claims of the '189 patent, and must be particular to the scope of claim 3. *Tandon Corp.*, 831 F.2d at 1023 (stating that when claims use different terms, those differences are presumed to reflect a difference in the scope of the claims).

The only intrinsic support Skyline cites for its construction of "plurality of coordinates

being included in a plurality of respective distinct blocks” as “more than one set of coordinates being described by the data contained in more than one data block” is the specification’s description of the preparation of the hierarchical database structure and the contents of the data blocks. Skyline’s Opening Brief at 15-26, *citing* ’189 patent at cols. 8:59-67, 9:1-39, 9:55-66. But the hierarchical structure of the data blocks is included in every claim of the ’189 patent, and is not particular to claims containing the “plurality of coordinates being included in a plurality of respective distinct blocks” limitation. The passages Skyline relies upon thus cannot support its “plurality of coordinates” construction, as they are found even in claims that do not have the “plurality of coordinates” language.

Skyline argues that Google’s proposed construction is ambiguous, but Skyline’s construction fails to give meaning to the words in the claim. Skyline’s construction deviates from the plain meaning of “respective” and “distinct,” but Skyline cites no intrinsic evidence for this deviation. Those portions of the specification that Skyline cites refer to “a plurality of blocks” covering an area of terrain, but there is no discussion of a “plurality of respective distinct blocks.” Meaning must be given to the added words “respective” and “distinct,” but Skyline’s construction improperly ignores them. *Exxon Chemical Patents*, 64 F.3d at 1557 (recognizing that meaning must be given to all words in a claim).

By contrast, Google’s proposed construction takes into account those words and is based on the ordinary meaning of “respective” and “distinct.” If giving the proper meaning to those words results in any ambiguity, the fault lies with how the claims were drafted, not with Google’s proposed construction. Claims should not be construed contrary to the ordinary meaning of words just to remedy indefiniteness or ambiguity in the claim language. *Phillips*, 415 F.3d at 1327, *citing Generation II Orthotics, Inc. v. Medical Tech., Inc.*, 263 F.3d 1356,

1365 (Fed. Cir. 2001) (“Claims can only be construed to preserve their validity where the proposed claim construction . . . does not revise or ignore the explicit language of the claims”).

Here, the explicit language of the claims compels the correct construction – that proposed by Google – which is focused on, and accounts for, the meaning of the words in the claim.

*Interactive Gift Express, Inc. v. CompuServer, Inc.*, 256 F.3d 1323, 1331 (Fed. Cir. 2001)

(stating that “the analytical focus must begin and remain centered on the language of the claims themselves”); *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996); *see also* Google’s Opening Brief at 16. Therefore, the Court should construe “**plurality of**

***coordinates being included in a plurality of respective distinct blocks***” as “***each one of the plural sets of coordinates being included in a separate distinct one of a plurality of data blocks describing three-dimensional terrain.***”

#### **D. Disputed Terms of Claim 7 and its Dependent Claims**

##### **1. “when not downloading blocks required by the renderer”**

<b>Google’s Proposed Construction</b>	<b>Skyline’s Proposed Construction</b>
<b>“when not downloading blocks required by the renderer”</b>	
during periods of time when the local computer is not downloading data blocks describing three-dimensional terrain in response to the coordinates received from the renderer	when not downloading data for displaying the scene corresponding to the current view

Skyline claims to support its construction with the intrinsic evidence, but the only intrinsic evidence it cites is the suggestion that multiple connections can be used in the invention claimed by the ’189 patent. *See* Skyline’s Opening Brief at 17, *citing* ’189 patent at col. 15:1-46, 15:59-67. Neither Skyline nor its expert, however, explains how having multiple connections supports, let alone compels, its proposed construction that “when not downloading blocks required by the renderer” means “when not downloading for displaying the scene corresponding to the current view.”

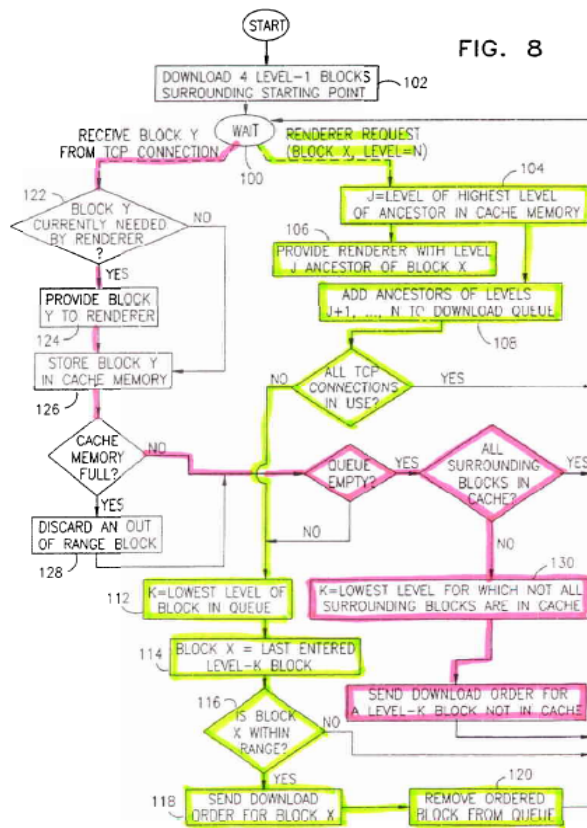
Instead, Skyline argues that Google's construction of "*when* not downloading blocks required by the renderer" as "*periods of time* when the local computer is not downloading data blocks describing three-dimensional terrain in response to the coordinates received from the renderer" does not make sense since with multiple connections, the local computer can be doing several different downloads at one time. Skyline's Opening Brief at 18. Skyline's argument is a red herring, as there is no nexus between having multiple connections and Skyline's proposed construction. Even with multiple connections, there will still be time periods when any one connection is not in use, as explained in the specification: "After downloading of a block has been completed, one of connections **76** is necessarily not in use." '189 patent at col. 15:59-60. Google's use of "periods of time," is meant only to address and clarify the term "when" in the claim language, and thus has no more to do with use of multiple connections than Skyline's use of the term "when."

The real dispute thus is not over the meaning of "when," but over the remainder of the phrase, "not downloading blocks required by the renderer." Skyline argues that this phrase means "not downloading for displaying the scene corresponding to the current view," whereas the patent specification, as shown by Google, requires that it should mean "not downloading data blocks describing three-dimensional terrain in response to the coordinates received by the renderer." The teachings of the patent specification resolve this dispute in Google's favor, as the disputed term relates not to displaying the view (as Skyline asserts), but to what mechanism triggers the download of data blocks.

Figure 8 of the '189 patent, a flow diagram describing actions taken by the local computer in accordance with a preferred embodiment, shows that in one path, downloads are triggered in response to the coordinates and resolution level received from the renderer. In the

other path, the downloads are triggered by another mechanism unrelated to the renderer's request. Given this context, the download of data blocks not required by the renderer phrase refers to downloads other than those made in response to the coordinates and resolution level received from the renderer. '189 patent at Figure 8 and col. 14:21-16:8; see Supp. Feiner Decl. ¶¶ 8-9.

In Figure 8 below, the actions corresponding to the download of data blocks are shown (and highlighted) generally on the right side of the figure.



*Id.* at Figure 8 (highlighting added).

As can be seen, the download of data blocks flows from two different paths. The first, highlighted in green and generally to the left, are download actions made in response to receiving coordinates and a resolution level from the renderer. The second, highlighted in pink and generally to the lower right, depicts the download of excess data blocks to fill cache memory

when not downloading in accordance with the first path, described in the specification as follows: “if the queue is empty, cache manager **74** fills cache memory **32** with blocks within the range of the current viewpoint.” ’189 patent at col. 15:63-65. In fact, the specification specifically teaches that “when connections **76** are *not in use bringing blocks 42 required by renderer 72*, cache manager **74** *downloads blocks* in the area of the viewpoint *to fill cache memory 32.*” Supp. Feiner Decl. ¶ 9. And Figure 8 shows (in pink in the lower right) that blocks are downloaded to fill cache memory (i.e., when the connections are not bringing blocks required by the renderer) when the download queue is empty and the local computer is not downloading data blocks in response to receiving coordinates and a resolution level from the renderer. Supp. Feiner Decl. ¶¶ 8-9. Thus, the context is what mechanism triggers the downloads, not whether the downloaded data blocks are used for displaying the view.

For these, and the other reasons explained in Google’s Opening Claim Construction Brief, the proper construction of “*when not downloading blocks required by the renderer*” is “*during periods of time when the local computer is not downloading data blocks describing three-dimensional terrain in response to the coordinates received from the renderer.*”

## 2. “Internet”

Google’s Proposed Construction	Skyline’s Proposed Construction
<b>“Internet”</b>	
publicly accessible network capable of relaying information via Internet Protocol, either alone or in connection with one or more other protocols	the publicly accessible world-wide network of that name, which is capable of relaying information via a TCP connection, but not including private networks even if they use internet protocols or have connections to the Internet

Skyline asks this Court to construe “Internet” to mean “the publicly accessible world-wide network of that name, which is capable of relaying information via a TCP connection, but not including private networks even if they use internet protocols or have connections to the

Internet.” In support of its “negative limitation” construction, Skyline cites that portion of the ’189 patent specification which states only that the “Internet” is a public network that preferably uses a standard TCP connection. *See* Skyline’s Opening Brief at 20-21, *citing* ’189 patent at cols. 2:32-37, 7:61-8:14, 12:10-13. Far from excluding private networks connected via TCP and using internet protocols, these disclosures, in fact, support Google’s proposed construction of “Internet” as “publicly accessible network capable of relaying information via Internet Protocol, either alone or in connection with one or more other protocols.”

Skyline tries to include the negative limitation of “not including private networks even if they use internet protocols or have connections to the Internet,” but such an exclusion is completely absent from the claim language and Skyline provides no support for it except a completely inapposite analogy regarding interconnected thoroughfares supported only by the extrinsic declaration of its expert.

Contrary to Skyline’s attempt to somehow exclude connected private networks that use Internet Protocol, the “Internet” is not a single, monolithic centralized computer but commonly defined inclusively as “the worldwide, publicly accessible network of interconnected computer networks that transmit data by packet switching using the standard Internet Protocol (IP). It is a ‘network of networks’ that consists of millions of smaller domestic, academic, business, and government networks, which together carry various information and services, such as electronic mail, online chat, file transfer, and the interlinked Web pages and other documents of the World Wide Web.” *See* Supplemental Declaration of Carolyn Chang in Support of Defendants’ Responsive Claim Construction Brief (“Supp. Chang Decl.”), Ex. M; *see also* Chang Decl., Ex. K (defining “Internet” as “[t]he worldwide *collection* of networks and gateways that use the TCP/IP suite of protocols to communicate with one another”); Google’s Opening Brief at 20.

Skyline's analogy comparing the Internet to a single expressway, the Mass Pike, fails to capture the fact that many varied and evolving networks of computers are included as part of the Internet. Google's proposed construction is consistent with this understanding and is thus not akin to claiming that one specific street, Massachusetts Avenue, is part of a separate highway, the Mass Pike. If anything, Skyline's analogy is more like trying to exclude from the "telephone network" the phone lines running into your neighborhood because they terminate into private residences. No one, however, would think that picking up the phone in your house to dial long distance somehow means your phone is not part of the telephone network.

The Internet's worldwide collection of networks is an amorphous amalgamation of many different and constantly changing computer networks, each with its own evolving structures and components. *See e.g.*, Supp. Chang Decl., Ex. M; Chang Decl., Ex. K. To require this collection to exclude private networks even if they are connected to and part of a larger network, as Skyline suggests, is analogous to claiming that one's personal phone line is not part of the public-switched telephone network just because that specific line is runs into your private residence. Just as individual personal phone lines are part of the public-switched telephone network, so too can individual private networks be part of the public Internet. There is nothing in the patent specification that justifies importing the additional exclusionary limitation in Skyline's proposed construction.

As Google's proposed construction comports with the teachings in the patent specification and the ordinary meaning of "***Internet***," that term is properly construed to mean "***publicly accessible network capable of relaying information via Internet Protocol, either alone or in connection with one or more other protocols.***"



3. “substantially all of the blocks surrounding a point in the terrain seen from the current viewpoint within a predetermined distance range”

Google’s Proposed Construction	Skyline’s Proposed Construction
<b>“substantially all of the blocks surrounding a point in the terrain seen from the current viewpoint within a predetermined distance range”</b>	
substantially all of the excess blocks describing three-dimensional terrain on all sides (in all directions) out to a pre-established distance boundary around a point in the terrain that is seen from the current viewpoint	substantially all of the blocks which include data covering terrain which is within a predetermined distance range in one or more directions from either the viewpoint or a point in the terrain visible from the current viewpoint

Skyline admits that the “substantially all of the blocks surrounding a point in the terrain seen from the current viewpoint within a predetermined distance range” phrase refers to “expanding the data for a view laterally along the surface *in all directions*.” Skyline’s Opening Brief at 21. Yet, it still advocates a construction of the term that only requires the download of excess data blocks in *one or more directions*.

Criticism of Google’s construction does not remedy the shortcomings with Skyline’s proposed construction. Skyline’s construction does not comport with what it has already admitted: the phrase requires the download of data in all directions, and not just blocks in one or more directions. This is so because the context is to enable the viewer to see in all directions, not just one or more. The specification provides that “cache manager 74 attempts to fill cache memory 32 with a sufficient number of blocks, *such that for any view direction* of the current view point, all blocks 42 required by renderer 72 are stored in cache memory 32.” ’189 patent at col. 12:17-20 (emphasis added); *see also* col. 15:63-65 (“cache manager 74 fills cache memory 32 with the blocks within the range of the current viewpoint, *so that, for any direction of view* from the current viewpoint there is no need to download further blocks from server 26) (emphasis added). Thus, blocks in all directions must be downloaded so that blocks for *any* direction are available in the local computer.

Skyline furthermore provides no intrinsic support for its interpretation, but instead argues that Google's construction requiring the download of excess data blocks in all directions would exclude a preferred embodiment because the '189 patent does not cover the display of data describing the interior of the Earth. *Id.* Skyline, however, makes this assertion regarding a "preferred embodiment" without any reference to an actual preferred embodiment described in the patent specification. There is in fact no intrinsic support for Skyline's claim, as the specification is silent as to underground terrain or the interior of the Earth. In any event, Google agrees that the download of "substantially all of the blocks surrounding a point in the terrain seen from the current viewpoint within a predetermined distance range" refers to substantially all the excess data blocks in all viewable directions from the current view, and would not include data corresponding to the interior of the Earth, for instance.

Accordingly, the Court should adopt Google's proposed construction of "*substantially all the blocks surrounding a point in the terrain seen from the current viewpoint within a predetermined distance range*" as "*substantially all of the excess data blocks describing three-dimensional terrain on all sides (in all directions) out to a pre-established distance from a point in the terrain that is seen from the current viewpoint.*"

### III. CONCLUSION

For the foregoing reasons, Google respectfully requests the Court to adopt its proposed constructions of the disputed terms of the '189 patent.

Dated: October 11, 2006

Respectfully submitted,

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**Certificate of Service**

I hereby certify that, on October 11, 2006, I caused a true and accurate copy of the foregoing document to be served upon all counsel of record for each party by complying with this Court's Administrative Procedures for Electronic Case Filing.

By: /s/ Carolyn Chang  
Carolyn Chang